

HOW TO BUY A...

BUELL XB12S

Buell's demise could be great news if you're hunting for a used XB12. Now's the perfect time to join the cult

Words **Kev Raymond** Pictures **Mark Manning**



THREE REASONS YOU WANT A BUELL XB12S

- Great handling, very nicely balanced
- Heavily discounted - lots of bike for your money
- You won't see one on every street corner

USED PRICE
£2350-£4625



→ Once an independent bike builder using off-the-shelf Harley engines, Buell morphed into a subsidiary of the Milwaukee giant, using specially developed powerplants allied to Erik Buell's unconventional chassis designs and in-your-face styling. Over the years underslung suspension and tube frames gave way to massive aluminium chassis and swingarms, and standard Harley motors gave way to Buell-specific lumps with higher revs and more power, but the unconventional styling and quirky technical touches remained.

By 2003 the XB9 range was well established, and the next move was to build a bigger, faster version. Rather than come up with a whole new bike, Buell just slotted a long-stroke motor into the XB9 chassis, which was more than capable of coping with the extra performance. The resulting hybrids combined the XB9's sweet-steering, hard-cornering confidence with a big rumble of corner-exit torque. The XB12S Lightning and XB12R Firebolt hit the market in late 2003 and although they've sold steadily since, they've never been mainstream bikes. But then again, that's precisely the appeal for many owners for whom individuality is more important than outright performance.

There's a solid base of knowledgeable, enthusiastic

HOW OWNERS RATE THE XB12

RIDER POWER 2009

According to RIDER Power 2009

Build quality	4
Brakes	3
Controls	4
Dealer	3
Engine	4
Gearbox	4
Handling/suspension	5
Headlight	3
Maintenance	3
Mirrors	4
Pillion comfort	3
Reliability	4
Rider comfort	4
Running costs	3
Wind protection	4
Overall score	78.83%

owners out there, and because they tend to keep their bikes a long time and fiddle with them, there's plenty of troubleshooting advice to be had. Now, with the demise of Buell, new bikes are heavily discounted and used values have dropped sharply. There'll probably never be a better time to try one for size. ➤

THE HISTORY OF THE

XB12



2004-05 XB12S LIGHTNING

Actually launched mid-2003, closely based on XB95 but with long-stroke motor and bigger throttle bodies. Fuel in frame, oil in swingarm, six-piston rim-mounted brake and belt drive.

1203cc/100bhp/179kg. Black, red.

2006-7 XB12S LIGHTNING



Updated gearbox and drive belt, lighter clutch, redesigned swingarm, slightly more fuel capacity.

1203cc/100bhp/179kg.

Orange, black, cherry (07).

2006 XB12SS LIGHTNING LONG



Longer swingarm and more fork rake give 40mm longer wheelbase. Bigger seat unit and revised frame give an extra two litres fuel capacity.

1203cc/100bhp/181kg. Orange, black, blue (06).

2007 XB12S CG



Introduced mid-2006. Shortened suspension, lower seat, otherwise as XB12S.

1203cc/100bhp/179kg. Orange, black, cherry.

2007 XB12S SUPER TT



Single-seat supermoto-style version with tall suspension from Ulysses and number boards on tail.

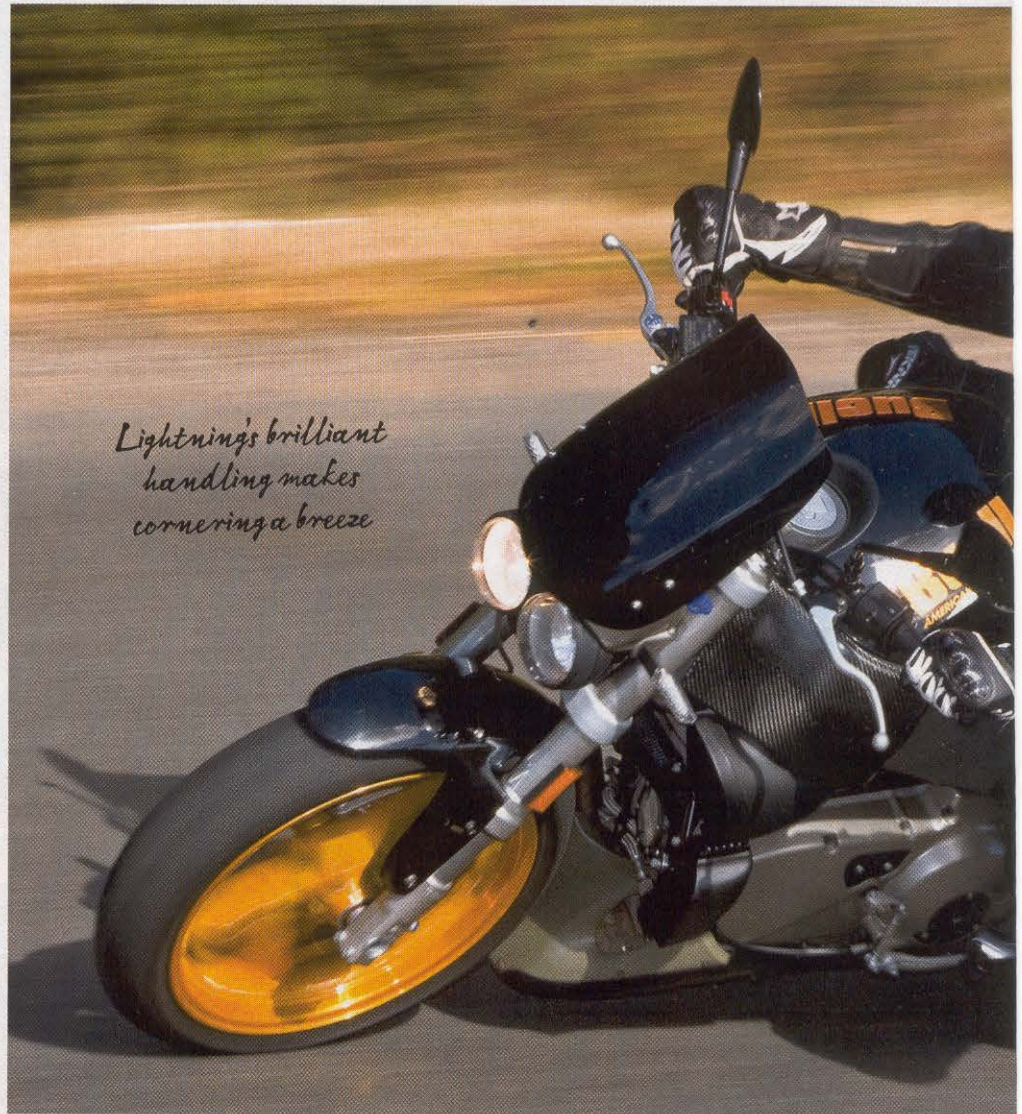
1203cc/100bhp/179kg. White.

2008 MODELS

All models basically unchanged but emissions-led exhaust mods drop power to 94bhp.

2009 MODELS

XB12S and XB12S Super TT dropped. Minor updates to SS and CG including new black finish on engine, frame and forks, a new eight-piston front brake caliper and bigger diameter forks (up 2mm to 43mm).



Lightning's brilliant handling makes cornering a breeze

Engine

It's based on a Harley Sportster engine, but very heavily modified, especially at the top end. The Sportster motor can only be tuned a little bit before you start running into serious overheating problems, so the Buell's top end is a complete rethink, with far better cooling, and hydraulic tappets making home servicing a doddle. It's mechanically pretty reliable, so long as it's not absolutely thrashed everywhere. Buell forums are full of anguished reports of mystery misfires and poor running, but there are very few major mechanical problems.

Buell doubled the oil change intervals to 10,000 miles in 2006 but most owners prefer to change at between 2500 and 5000 miles. Some owners suggest that these engines don't like fully synthetic oils - they've got large tolerances compared with water-cooled engines and using super-thin synthetics can result in heavy oil consumption, especially during cold starts. Harley recommend diesel-grade oils - no sniggering at the back... Bear in mind the engine/box are pre-unit (separate) construction, so you have separate gearbox oil. Oil often finds its way out from the rocker covers as well - good for your shock, which gets a nice corrosion-resistant oil mist. A lot less welcome when it gets past the shock and ends up all over the rear tyre.

It's worth pointing out that although peak power is at 6600rpm and the redline a couple of hundred revs higher, Buell state the maximum 'sustainable' rpm is 6400 - this is just not an engine designed to rev freely, so you're better off using the torque rather than the peak power.

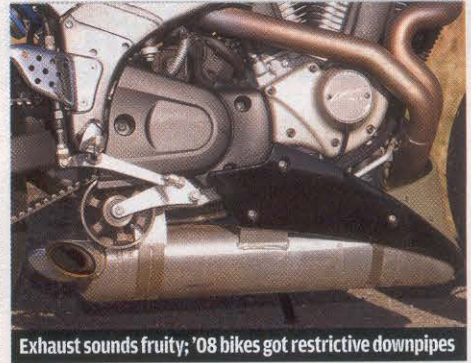
Gearbox

Five speed, and basically a Harley unit, so it was never going to be the slickest-shifting box in the world. If you're lazy with your upshifts it's not uncommon for the box to jump out of second into neutral - do that too many times and you start to damage the selector forks and synchro rings. Downshifts are slow as well - try to bang down several gears at once as you would on a conventional sportsbike and you'll cause mechanical mayhem. Not just in the gearbox either - it's easy to over-rev the engine on downshifts and cause top-end damage.

It can take a while to get used to, but for every two or three gearchanges you'd be accustomed to making on an inline four, you'll probably only need one on this. Before blaming noisy shifts and jumping on the gearbox, check your primary drive chain - it might need adjusting. If you want more acceleration, a revised primary gearset is available from www.trojan-horse.co.uk.



Rim-mounted disc looks odd but works well



Exhaust sounds fruity; '08 bikes got restrictive downpipes



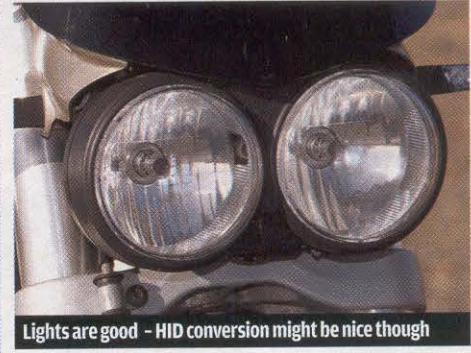
Kevlar drivebelt is clean, quiet, reliable and fuss-free



Quality Showa suspension - fully adjustable front and rear



Spend too long near the redline and you might regret it



Lights are good - HID conversion might be nice though

Chassis

Unlike most bikes, the chassis and swingarm both serve dual functions. The frame holds the fuel, which is one reason why it's only got a pretty measly 14-litre capacity (slightly improved from 2006, and a lot better on the SS Long version). And the oil for the dry sump engine is held in the main body of the swingarm, near the pivot. Because of this, it's even more critical than usual to check that the frame and swingarm haven't been damaged in a crash.

Oil light

Can come on and refuse to go off if the bike's been dropped on its side at any point. Basically an air bubble in the oil line fools the sensor into thinking there's not enough pressure in the system. The problem should go away if you change the oil and filter (or just remove and replace the filter).

Electrics

Can give trouble if neglected, but generally pretty good. Most problems are vibration-related, with connectors shaking apart. Lots of rough running issues are also caused by the main earth connection from battery to frame coming loose - it's hard to see and harder to get at, but worth checking to make sure it's clean and tight. The battery is a bit small for

the demands made on it, and if it's tired it can cause misfiring and rough running. Invest in a higher capacity battery (see www.odysseybattery.com). The throttle position sensor is another troublesome little blighter - some weren't very well fitted from the factory and go out of adjustment easily. Removal and careful refitting helps a lot. Even good ones need zeroing periodically - schedule says every 10,000 miles but every service is better. Even then it'll sometimes need doing in between.

Fuel injection

A lot of ongoing hassle for owners comes down to the fuel injection/engine management system. In theory fuel injection is great for big twins as it's hard to get carbs working correctly to fill those big cylinders at high revs while still allowing decent low-down fuelling. In practice, it still has a harder time working on the long-stroke XB12 than on an equivalent four, and it's inevitable that the factory compromise won't suit everyone, with hesitant low-rev behaviour a commonly cited gripe.

There have been various factory upgrades to the engine management software, with no consensus on which is best. The good news is that a very clever German owner and some helpful friends developed a PC-based program called EcmSpy that allows you

to go into the XB's brain and mess with its thought processes. The even better news is they made it available for free download. The bad news is that they've stopped development and downloads. However there are plenty of copies in circulation, and Gunter - the software's originator - is active on various forums and still prepared to help out with advice when he has time. This is the kind of philanthropy we all need to encourage. You can find out more about the software and how it works at www.ecmspy.com or follow links from XBEG forums.

EcmSpy is also handy for reading engine management fault codes - you can work them out by a process of shorting pins on the diagnostics plug and counting flashes on the warning light, but it's a long-winded way of doing it.

Drive belt

Very reliable in normal use. Early bikes had a scheduled change at 25,000 miles. From 2006 a tougher belt was fitted and it's just a case of keeping an eye on it - damage from trapped stones is the most common cause of failure and can also reduce pulley life. The standard tensioner can put a strain on the belt under some circumstances. An aftermarket spring-loaded tensioner which keeps a constant tension at all times is worth shelling out for. **X**

I BOUGHT ONE



SIMON BANKS

Occupation: College tutor

Year: 2009 XB125S

Mileage: 1600 (it's only a few weeks old)

Good points: Living in East Lancashire gives me access to some of the best biking roads in the country. My preference is for big, low-revving, torquey V twins in a decent chassis - I'd have a Vincent if I could afford one. I've owned and ridden bikes for 33 years and I've owned all sorts, but never a Buell. Anyway, I finally decided to buy an XB 125S Lightning.

I couldn't help but spend time gazing at the innovative design of this bike - fuel in the frame, oil in the swinging arm, single wheel-mounted front disc, underslung exhaust, all designed to centralise and minimize weight. Then of course there's the belt drive - no oil or muck around the back end of this bike.

I've done 1600 miles in just a few weeks, and I can honestly say this is the best bike I've ever owned. It's plenty fast enough for a naked bike, with superb handling and braking, and most of all, BIG FUN. It's not R1 fast, but this bike is not about outright speed. You can carry speed deep into turns and the incredibly torquey V-twin motor punches out of corners early and quickly. The rear brake lacks a bit of feel but the huge eight-pot job on the front end stops the bike pronto. The bike has amazing ground clearance. The sound of the thing is truly intoxicating. The most surprising thing of all

"Plenty fast enough for a naked bike - superb handling and braking, and BIG FUN"

though is the level of comfort the bike offers. I can ride the thing until the tank is empty and feel not the slightest discomfort. My wife even finds it comfortable as a pillion. It vibrates quite badly at tickover, but it's as smooth as silk as soon as it's on the move.

In summary, it's a fantastic bike and it's different. I'm really pleased with it.

Bad points: The only thing that worried me was the tension on the belt from new. It just seemed too tight. After a few hundred miles, I fitted a Free Spirits belt tensioner (a sprung-loaded aftermarket job). From an engineering point of view, this is a sensible modification in order to save belts and bearings.

I also fitted 2007 header pipes because models from 2008 on have smaller headers in order to meet the latest EU emission laws, which reduces power.



Finish

Spend time on cleaning and it'll stay looking good, but neglect it and/or use it in salty conditions and it'll quickly start to lose its shine. Wheels can start to look tatty and are hard to clean, and the front of the engine and exhaust take a hammering from stone chips and road gunge. The bodywork is colour-moulded rather than painted - the owner's manual has a big section on exactly how to care for it, but the main thing is to avoid any abrasives and brushes which can cause scratching, as you can't simply T-Cut out minor damage.

Brakes

That unconventional rim-mounted front disc with its six-pot caliper works very well, although there were a couple of reports of warped discs. The 2009 bike got a mighty eight-pot caliper - more for cosmetic reasons and because the 1125R had one than for any gain in stopping power though.

Bearings

The wheel bearings in particular are a bit marginal and don't last that long. Rear bearings, as well as gearbox output shaft bearings, get a hard time if the belt tension is too tight. But fronts go as well. Avoid jetwashing, which can wash all the grease out of the bearings and accelerate their demise.

Exhaust

The 2008 model got revised front header pipes which allowed it to pass stricter emissions and noise rules but robbed the engine of about 8bhp. Earlier pipes bolt straight on and restore the missing go. There's a power valve in the exhaust which sometimes gives trouble. It's hard to see whether or not it's working, but if it's not - often just a case of the actuator rods coming adrift - it can cause all sorts of mysterious rough running problems, as can loose header pipe connections. Worth checking before assuming your fuel map's up the spout. There aren't all that many replacement cans

available - Buell used to sell a race can, but they've dropped that. Remus replacements in stainless are the most popular upgrade and not too noisy.

Suspension

This is quality kit - fully adjustable and also fully rebuildable. And the adjustments actually make a difference (on some Japanese bikes the whole range of damping adjustment makes so little actual difference you may as well not bother). The upside is there's scope for a savvy owner to set the suspension up exactly the way he or she wants it. The downside is there's scope for the less experienced to cock it all up big time and end up with an evil-handling horror.

If the latter scenario rings bells with you, get yourself an original owners' handbook - as well as a range of basic suspension settings for different riding styles/weights/road conditions, it has a very useful troubleshooting section which talks you through how to set the suspension up properly.

On the web

There's a thriving online community out there, and believe me, you're going to appreciate it. This is a bike that inspires a lot of loyalty among owners, but also requires a lot of owner input and ingenuity to keep on song - that's part of the attraction for a lot of owners, of course.

The US-based forum www.buellxb.com has an online shop (although they won't ship to Europe), with lots of good chat and technical info. US-based www.buellforums.com is also worth a look.

For a more UK-centred site, try www.ukbeg.com - again, a lively forum with loads of clued-up (and friendly) members but also an internet-based bike club that has meets and ride-outs.

Manuals are downloadable from www.buell.com although you need your bike's VIN number to get authorisation. Otherwise there are plenty of links from the forums to free manual downloads. Try www.trojan-horse.co.uk for parts and accessories - they've got the lot.

Vital statistics

Spares prices

ORIGINAL-EQUIPMENT PARTS PRICES

Front brake pads (pair)	£66.18
Front brake disc	£183.23
Front wheel	£362.14
Front wheel bearings	£16.39
Handlebar	£64.41
Front brake lever	£48.24
Drive belt kit	£188.61
Air filter	£3.58
Oil filter	£7.50
Footrest assembly (right hand)	£17.20
Headlight	£144.75
Dummy tank cover	£236.04
Clutch friction plate	£25.82
Clutch driven plate	£10.79
Clocks	£296.39

All prices include VAT. Source: Buell UK

AFTERMARKET PART PRICES

Not much from the mainstream retailers, so you have to go and seek out the specialists.

Silencer (Remus slip-on)	£639
Front brake pads (Braking, pair)	£34.44
Free Spirit belt tensioner	£126.50
Carbon/Kevlar frame protectors	£184
Air filter (K+N)	£42.24
Spark plug (NGK Iridium, each)	£10.49
Oil filter (K+N)	£42.24
Front disc (Braking wavy)	£171.87
Fork springs (Hyperpro)	£80
Flyscreen	£69.95
Carbon 'tank' airbox cover	£299.48

All prices include VAT.

Source: www.trojan-horse.co.uk or 0800 4580677

BREAKERS

Until recently there was a dedicated Buell breakers - the XB Centre. But they've called it a day and we can't find anyone else breaking an XB12 at the moment. There aren't a lot of them around anyway and owners tend to repair rather than scrap.

Recalls

There were two recalls for the XB12S Lightning. Main horn feed wires on some models could rub and fray, potentially blowing either the horn or main fuse, and a few bikes had a sidestand retraction problem, cured with a revised bolt. In addition, the XB12CG had a potential front brake problem - the hose could rub on the tyre and fail. There have also been numerous updates for revised engine management software. A dealer can check if all this work has been done.

Service schedule

A pretty simple schedule based on 5000-mile intervals, alternating minor and major services. Hydraulic tappets means no valve clearance checks, which keeps things simple. This is the schedule for a 2004 XB12S - later models are the same except from

I SELL THEM!

Steve Loxton, Black Bear Motorcycles
(01638 664455 or www.blackbear.co.uk)

"There's a strong customer base out there who love them to bits. They tend to be different - a particular type of person who doesn't want the norm, doesn't like the mainstream. There's a lot of similarity with Guzzi owners actually - people who don't necessarily want the highest performance but do like handling and do like to fiddle with their bikes. The most popular mod is a race exhaust - Remus are favourite.

"They're pretty well put together really - very few mechanical issues, and so long as you avoid the salt they stay looking good. When we buy one in we're looking for the same stuff as any other bike - general condition, consumables, service history etc. There have been various upgrades for the ECU so we always check that all the updates have been done. Most of the updates are to cure rough low-speed running, but face it, this is a big twin, not a four, so it's always going to splutter a bit if you grab a load of throttle from tickover.

"It's interesting at the moment with the demise of Buell. Harley are clearing stock and giving dealers really good deals, so a new XB12S is under five grand now. That's going to hurt values of used bikes in the short term, but I have a feeling it'll pick up again. At the moment demand is strong - all the waverers who've ever thought they might like a Buell one day know it's now or never, so they're all coming out of the woodwork to get a bargain."

2006 on the oil change interval was doubled to 10000 miles, and there was no scheduled replacement for the drivebelt - just a regular check.

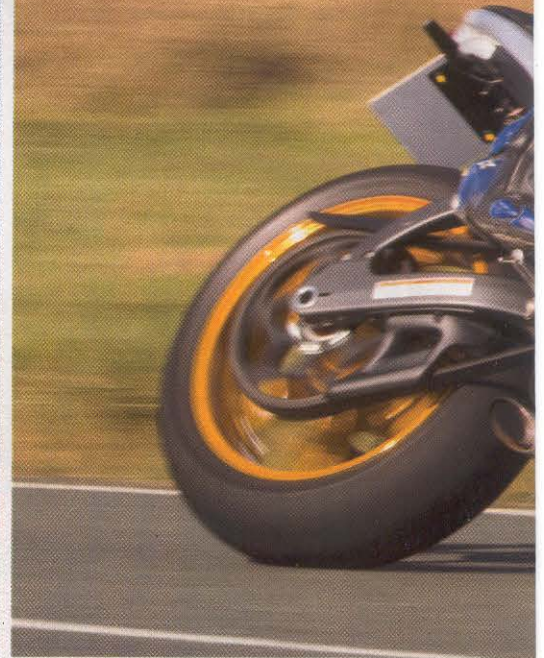
1000 miles

Break-in service and check. Oil and filter changed, primary chain adjusted and transmission oil changed, throttle position sensor (TPS) checked and adjusted to zero, idle speed set, control cables adjusted, oil cooler fins cleaned, general safety inspection, lube and adjustment.



Owners tend to be keen fiddlers so few Buells stay standard

The XB12 can chew rear tyres - try a sports touring rear compound



5000 miles

As 1000 miles plus head bearing check, brake system leak check, no scheduled TPS adjustment (although it's worth doing anyway), electrical check.

10,000 miles

As 5000 miles plus ignition timing and TPS checked, spark plugs changed, fork oil changed, all critical fasteners torque checked.

Additionally

Air filter replaced at 20000, drive belt and idler pulley changed at 25k.

Tyres

Standard supersport 600 sizes means plenty of choice, and contributes to the Buell's sweet-steering handling. Many riders use a sports touring (ST) rear for longer life, as the rear gets a mauling from the engine's torque.

Front: 120/70 ZR17 Rear: 180/55 ZR17

Make/type	F	R
Avon AV55/56 Storm 2 (ST)	£78	£103
Avon A59/60 VP2 (S)	£82	£110
Bridgestone BT-021 (ST)	£85	£103
Bridgestone BT-016 (S)	£91	£111
Continental C Motion (ST)	£67	£82
Continental Sport Attack (S)	£79	£94
Dunlop Roadsmart (ST)	£89	£115
Dunlop Qualifier II (S)	£89	£115
Maxxis MR6029 (ST)	£58	£68
Maxxis MA-PS (S)	£61	£69
Metzeler Roadtec Z6 (ST)	£92	£118
Metzeler Sportec M3 (S)	£94	£121
Michelin Pilot Road 2 (ST)	£91	£124



I BOUGHT ONE



JAMIE PHIPPS

Occupation: Quantity surveyor
Year: 2003 XB125
Mileage: 9000

Good points: I bought this from my stepmother. I'd test ridden it when she had it and liked it a lot - I thought it was different and brilliant - so when she wanted to sell, I bought it. I had a GSX-R600 before so it was a bit of a change. I like the looks, although that's just personal taste. I just like that stubby, retro streetfighter style. The best bit's definitely the handling though. I like scratching round B-roads and it's perfect. It'd probably be great on a track too, but I haven't tried it yet. It spends most of its time over on its side, then on the way out of the corner you just straighten it up and nail the throttle and it just goes - really grunty.

On a practical note the drivebelt is a plus point - I hate tensioning and lubing chains. That rim disc brake doesn't seem to make much difference, but does look good. I've got a race can and ECU and it sounds ace - really deep and throaty. The suspension's very high quality, but you do have to get it set up right for your weight and style - it's quite

"It's impractical on so many levels, but ride it on the right roads and it makes sense"

sensitive to settings.

Bad points: The only real problem I've had with it was when a mate crashed it - but that's not the bike's fault. He put it into a ditch on a pretty quick corner and it didn't bend anything vital - just bars and seat subframe really. Although the handling's great, the Lightning's not really very good at anything else. The engine's made from pig iron and just when it's getting going it runs out of revs - it needs a couple of thousand more revs really. Doesn't deliver very good mpg either - at least not the way I ride it. It's a really small bike and the position is low and cramped - I'm 5ft 10in and it's cramped for me, so six-footers look like they're riding a monkey bike.

It can chew rear tyres - I use a sticky front and a sports touring rear, which is a good compromise. The gearbox is a bit clunky, especially after the GSX-R's slick-shifting box. It's lousy for carrying any pillion who's bigger than a rucksack, and it's not good for longer trips anyway - I've been to Brands a couple of times and it was a real pain with the windblast. It's just impractical on so many levels, but then you ride it on the right roads and suddenly it all makes sense. Would I buy another one? No, but I would like to keep this one and get something else to use day to day. Then when the sun's out and the roads are dry I can say, 'Right, I'll take the Buell'. The rest of the time I'll take the Honda or whatever.

WHAT TO PAY

YEAR/REG	DEALER PRICE	PRIVATE GOOD	PRIVATE POOR	PART EXCHANGE
2003/53	3490	2905	2110	2350
2004/53	3535	3030	2220	2475
2004/04	3640	3120	2290	2550
2004/54	3745	3210	2355	2620
2005/54	3865	3330	2465	2745
2005/05	3965	3420	2530	2815
2005/55	4070	3510	2530	2815
2006/55	4150	3600	2685	2990
2006/06	4282	3715	2770	3085
2006/56	4420	3835	2860	3185
2007/56	2290	3920	2950	3285
2007/07	4625	4035	3035	3380

Insurance

At NU group 16 the XB125 is lumped in with Hayabusas and the like, so insurance costs an arm and a leg. These are NU guideline quotes for a 2004 XB125 worth about £3000, garaged and fitted with an alarm. Rider has five years' NCB. NU don't quote TPFT for this bike as it's deemed too high a risk. It's hard to see why it should be group 16, as it's not really a hooligan bike and the theft risk should be lower than for more mainstream models, but maybe high crash repair costs push up the averages.

COMP	RURAL	CITY
25 year-old	£1911	£3348
35 year-old	£877	£1523
45 year-old	£712	£1233

SPECIFICATION

2004 XB125 LIGHTNING

Engine	1203cc 45° V-twin, 2v per cyl, air/oil/fan cooled, fuel injected
Power	100bhp @ 6600rpm
Torque	81lb.ft @ 6000rpm
Transmission	5-speed, belt drive
Chassis	aluminium twin spar
Suspension (f)	43mm USD forks, adjustable
Suspension (r)	Showa monoshock, adjustable
Dry weight	179kg
Seat height	765mm
Fuel tank	14 litres
Tyre (f)	120/70 ZR17
Tyre (r)	180/55 ZR17
Insurance	group 16

Used values

Normally we just let the used prices speak for themselves, but this month it's different. Our prices are taken from trade bible Parker's, as usual, but with the recent announcement that Buell production was coming to an end and the Buell brand itself was being dropped, these figures are probably already out of date. Some owners will be wanting to offload before reliability becomes an issue, while some buyers will be wanting to get one while they can. And with dealers heavily discounting existing stock - as low as £4995 for a new XB125 - it doesn't take a genius to work out that no one's going to pay four grand for a 2005 bike. Our advice? If you've got one, hang onto it for now. If you want one, get your best haggling trousers on and go for it.